- 1. (original): An ink-jet printing process for printing textile fibre materials, wherein the fiber materials are printed with an aqueous ink comprising
- (I) at least one disperse dye, and
- (II) glycerol,

said ink having a viscosity of from 5 to 20 mPa s at 25°C, and wherein said ink is applied to the fiber material with an ink-jet print head comprising an ink supply layer (b) receiving ink from an external ink reservoir, said ink supply layer having a first side and a second side and comprising, a porous medium having a plurality of pores therein and a plurality of holes extending therethrough, so as to allow passage of the ink.

2. (original): A process according to claim 1, wherein the disperse dye is a dye of the formula

$$R_{1} = N = N - NR_{e}R_{7}$$

$$R_{3} = R_{5}$$

$$R_{5} = NR_{e}R_{7}$$

$$R_{1} = NR_{e}R_{7}$$

$$R_{2} = NR_{e}R_{7}$$

$$R_{3} = R_{5}$$

$$R_{4} = NR_{e}R_{7}$$

$$R_{5} = NR_{e}R_{7}$$

in which

R₁ is halogen, nitro or cyano,

R₂ is hydrogen, halogen, nitro or cyano,

R₃ is hydrogen, halogen or cyano,

R₄ is hydrogen, halogen, C₁-C₄alkyl or C₁-C₄alkoxy,

R₅ is hydrogen, halogen or C₂-C₄alkanoylamino, and

 R_6 and R_7 independently of one another are hydrogen, allyl, C_1 - C_4 alkyl which is unsubstituted or substituted by hydroxy, cyano, C_1 - C_4 alkoxy, C_1 - C_4 alkoxy- C_1 - C_4 alkoxy, C_2 - C_4 alkoxy, C_2 - C_4 alkoxy, C_3 - C_4 alkoxy, C_4 - C_4 alkoxy, C_5 - C_4 alkoxy, C_7 - C_8 -C

in which

 R_8 is hydrogen, C_1 - C_4 alkyl, phenyl or phenylsulfonyl, the benzene ring in phenyl and phenylsulfonyl being unsubstituted or substituted by C_1 - C_4 alkyl, sulfo or C_1 - C_4 alkylsulfonyloxy,

 R_9 is hydroxy, amino, N-mono- or N,N-di- C_1 - C_4 alkylamino, phenylamino, the benzene ring in phenyl being unsubstituted or substituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_2 - C_4 alkanoylamino or halogen,

R₁₀ is hydrogen, C₁-C₄alkoxy or cyano,

R₁₁ is hydrogen, C₁-C₄alkoxy, phenoxy or the radical -O-C₆H₅-SO₂-NH-(CH₂)₃-O-C₂H₅,

R₁₂ is hydrogen, hydroxy or nitro, and

R₁₃ is hydrogen, hydroxy or nitro,

$$R_{18} \xrightarrow{R_{19}} R_{15} \xrightarrow{R_{16}} NHR_{17}$$

$$NHR_{14}$$

$$(3),$$

in which

R₁₄ is C₁-C₄alkyl which is unsubstituted or substituted by hydroxy,

R₁₅ is C₁-C₄alkyl,

R₁₆ is cyano,

 R_{17} is the radical of the formula -(CH_2)₃-O-(CH_2)₂-O-C₆H₅,

R₁₈ is halogen, nitro or cyano, and

R₁₉ is hydrogen, halogen, nitro or cyano,

$$R_{23} \longrightarrow N = N \longrightarrow N = N$$

$$R_{22} \longrightarrow N = N \longrightarrow N$$

$$R_{21} \longrightarrow N = N$$

$$R_{22} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

$$R_{22} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

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$$R_{21} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

$$R_{22} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

$$R_{22} \longrightarrow N = N$$

$$R_{21} \longrightarrow N = N$$

$$R_{22} \longrightarrow N = N$$

$$R_{23} \longrightarrow N = N$$

$$R_{24} \longrightarrow N = N$$

$$R_{25} \longrightarrow$$

in which

R₂₀ is C₁-C₄alkyl,

R₂₁ is C₁-C₄alkyl which is unsubstituted or substituted by C₁-C₄alkoxy and

 R_{22} is the radical -COOCH $_2$ CH $_2$ OC $_6$ H $_5$ und R_{23} is hydrogen or

R₂₂ is hydrogen and R₂₃ is the radical -N=N-C₆H₅,

$$\begin{array}{c|c}
 & NO_2 \\
\hline
 & N-SO_2 \\
\hline
 & H-SO_2
\end{array}$$
(5),

where the rings A and B are unsubstituted or substituted one or more times by halogen,

$$\begin{array}{c|c}
 & NH_2 \\
 & N-R_{24}
\end{array}$$
(6),

in which

 R_{24} is C_1 - C_4 alkyl, which is unsubstituted or substituted by hydroxy, C_1 - C_4 alkoxy, C_1 - C_4 alkoxy, C_2 - C_4 alkoxy or C_1 - C_4 Alkox

$$\begin{array}{c} NC \\ C=CH \\ NC \\ H_3C \\ CH_2CH_2OCONH \end{array}$$

$$R_{27} \xrightarrow{R_{28}} CN$$

$$R_{28} \xrightarrow{R_{26}} N = N$$

$$R_{26} (8),$$

in which

R₂₅ is C₁-C₄alkyl,

 R_{26} is C_1 - C_4 alkyl, which is unsubstituted or substituted by C_1 - C_4 alkoxy,

R₂₇ is hydrogen, C₁-C₄alkoxy or halogen, and

R₂₈ is hydrogen, nitro, halogen or phenylsulfonyloxy,

$$R_{30}$$
 R_{31}
 R_{32}
 $N=N$
 N

in which

 R_{29} , R_{30} , R_{31} and R_{32} independently of one another are hydrogen or halogen,

 R_{33} is hydrogen, halogen, C_1 - C_4 alkyl or C_1 - C_4 alkoxy,

R₃₄ is hydrogen, halogen or C₂-C₄alkanoylamino, and

R₃₅ and R₃₆ independently of one another are hydrogen, C₁-C₄alkyl, which is unsubstituted or substituted by hydroxy, cyano, acetoxy or phenoxy,

in which

R₃₇ is hydrogen or halogen,

$$O = O$$

$$O =$$

in which

 R_{38} is hydrogen, C_1 - C_4 alkyl, tetrahydrofuran-2-yl or C_1 - C_4 alkoxycarbonyl, which is unsubstituted or substituted in the alkyl by C_1 - C_4 alkoxy,

$$R_{39} = R_{41}$$

$$0 \qquad SR_{42}$$

$$(12),$$

in which

 R_{39} is hydrogen or thiophenyl, which is unsubstituted or substituted in the phenyl by C_1 - C_4 alkyl or C_1 - C_4 -alkoxy,

R₄₀ is hydrogen, hydroxy or amino,

 R_{41} is hydrogen, halogen, cyano or thiophenyl, which is unsubstituted or substituted in the phenyl by C_1 - C_4 -alkoxy, phenoxy or phenyl, and

R₄₂ is phenyl, which is unsubstituted or substituted by halogen, C₁-C₄alkyl or C₁-C₄-alkoxy,

$$R_{\overline{43}} N = N = N - NR_{48}R_{49}$$
 (13),

in which

R₄₃ is hydrogen or C₁-C₄alkyl,

R₄₄ and R₄₅ independently of one another are hydrogen, halogen, nitro or cyano,

R₄₆ is hydrogen, halogen, C₁-C₄alkyl or C₁-C₄alkoxy,

R₄₇ is hydrogen, halogen or C₂-C₄alkanoylamino, and

 R_{48} and R_{49} independently of one another are hydrogen or C_1 - C_4 alkyl, which is unsubstituted or substituted by hydroxy, cyano, C_1 - C_4 alkoxy, C_1 - C_4 alkoxy, C_2 - C_4 alkoxy, C_2 - C_4 alkoxy, C_2 - C_4 alkoxy, C_3 - C_4 - C_4 alkoxy, C_3 - C_4

- 3. (currently amended): A process according to claim 1-or-2, wherein the ink comprises glycerol in an amount of from 5 to 60 % by weight, preferably from 5 to 50 % by weight, based on the total weight of the ink.
- 4. (currently amended): A process according to any one of claims 1 to 3 claim 1, wherein the viscosity of the ink is from 6 to 14 mPa·s at 25°C, preferably from 8 to 11 mPa·s at 25°C.

- 5. (currently amended): A process according to any one of claims 1 to 4 claim 1, wherein the ink further comprises diethylene glycol or dipropylene glycol, in particular dipropylene glycol.
- 6. (currently amended): A process according to any one of claims 1 to 5 claim 1, wherein printing is performed by means of an ink-jet printing device provided with at least one ink-jet print head which comprises
- a nozzle layer (a) defining a plurality of ejection nozzles,
- an ink supply layer (b) which is formed from a porous material having a multitude of small
 interconnected pores so as to allow passage of ink therethrough, said ink supply layer featuring a
 plurality of connecting bores from the rear surface to the front surface, each of said connecting
 bore being aligned so as to connect between a corresponding one of said ejection nozzles and
- a deflection layer (c), comprising a plurality of transducers related to said connecting bores for ejecting ink droplets out through the nozzles.
- 7. (currently amended): A process according to any one of claims 1 to 6 claim 1, wherein printing is performed by means of an ink-jet printing device provided with at least one ink-jet print head which comprises
- a nozzle layer (a) defining a plurality of ejection nozzles,
- an ink supply layer (b) having a front surface associated with the nozzle layer and a rear surface associated with a cavity layer (d), said ink supply layer being formed with a plurality of connecting bores from said rear surface to said front surface, each connecting bore being aligned so as to connect between a corresponding one of said ink cavities and a corresponding one of said ejection nozzles, wherein said ink supply layer additionally features
 - (i) a pattern of ink distribution channels formed in said front surface, and
 - (ii) at least one ink inlet bore passing from said rear surface to said front surface and configured so as to be in direct fluid communication with at least part of said pattern of ink distribution channels, said pattern of ink distribution channels and said at least one ink inlet bore together defining part of an ink flow path which passes from said rear surface through said at least one ink inlet bore to said pattern of ink distribution channels on said front surface, and through said porous material to said plurality of ink cavities, and
- a deflection layer (c), comprising a plurality of transducers related to said connecting bores for ejecting ink droplets out through the nozzles.

- 8. (currently amended): A process according to any one of claims 1 to 7 claim 1, wherein the transducer is a piezoelectric element.
- 9. (currently amended): A process according to any one of claims 1 to 8 claim 1, wherein polyester-containing fibre materials are printed.
- 10. (original): An aqueous printing ink for the ink-jet printing process, comprising
- (I) at least one disperse dye selected from the group of dyes of the formulae (1) to (13) according to claim 2.
- (II) from 10 to 35 % by weight of glycerol based on the total weight of the ink, and
- (III) from 10 to 25 % by weight of dipropylene glycol based on the total weight of the ink, said ink having a viscosity of from 5 to 20 mPa s at 25°C.